

- Stem hollow at maturity; spores pale-yellow, elliptical. (*Boletus castaneus.*) **H**
- Stem and pileus covered with a conspicuous sulphur-yellow powder. (*Boletus Ravenelii.*) **I**
- Not as above.
- Spores flesh-colored; tubes adnate, whitish, tinted by the spores at maturity. (*Boletus felleus.*) **J**
- Spores not flesh-colored, usually yellowish-brown.
- Tubes with red or reddish-brown mouths, yellowish within. (*Boletus purpureus.*) **K**
- Tubes not as above.
- Tubes free, white, not stuffed when young; stem not reticulated, often scabrous. (*Boletus scaber.*) **L**
- Tubes adnate, white or yellow, not stuffed when young.
- Stem reticulated. (*Boletus ornatipes.*) **M**
- Stem not reticulated. (*Boletus chrysenteron.*) **N**
- Not as above. (*Boletus edulis.*) **O**

NEW YORK BOTANICAL GARDEN.

SHORTER NOTES

JUNGERMANNIA IN NEW HAMPSHIRE. — All four species of the genus *Jungermannia* hitherto reported from New England have been collected by the writer at Waterville, New Hampshire, during 1906 and 1907. This, while a non-calcareous region, is well supplied with all the bryophytes to be expected there.

The commonest is *J. lanceolata* L., reported from all the New England States. By living on rocks or humus, it is independent of the underlying geological formations; but the other three are rock- and talus-growing plants, and avoid limestone at that. As *J. lanceolata* is unmistakable when fertile, it is herewith dismissed.

New Hampshire is the only state from which the subalpine *J. sphaerocarpa* Hook. is reported. It is found at Waterville on wet granite ledges, facing north, at 2,500 feet altitude, and with abundant perianths. It is a delicate plant, of a clear light-green, without much trace of purple; and it grew mixed with *Marsupella emarginata* (Ehrh.) Dum., *Lophozia alpestris* (Schleich.) Evans, etc.

The other two species were on granite rocks in Mad River, at

Tyler's Spring (45°) at 1,500 feet altitude. This large spring cools the whole neighborhood, but whether that has any bearing upon the occurrence of these particular species here is not known to the writer.

Jungermannia pumila With. grew on the large stones in the river just above the water-line, and bore plenty of perianths. It was in neat dark-green tufts, which were very noticeable among the *Scapaniae*, *Grimmiae*, *Rhacomitrium aciculare*, etc., occupying the same rocks. Reported from Vermont, New Hampshire and Connecticut.

Jungermannia cordifolia Hook. was also on the river rocks in front of the spring, just at the water-line, some of it, in fact, being submerged, although the river was low this year. This is the second station for New England, the other being at Rainbow, Conn. (See Evans, *Rhodora* 6: J1 1904). These plants were sterile, and small, as they grew on the rocks with only a little sand about their rhizoids, but were otherwise characteristic. They are purplish-black, in contrast to the last-named species, and are most distinct, with their heart-shaped leaves, thin cell-walls without trigones, and flagella. It should be sought in the remaining New England states. The allied *J. riparia* Tayl. is a limestone plant.

Without doubt there are other species of this genus still undetected among the White Mountains, especially in the vicinity of Mt. Carrigain, which is as yet practically unexplored.

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REVIEWS

Cole's Bermuda in Periodical Literature *

The author of the handsome and scholarly book that has recently appeared under the title of "Bermuda in Periodical Literature" has given especial attention to the botany, zoölogy

* Cole, George Watson. Bermuda in Periodical Literature, with occasional references to other works: A Bibliography. Pp. ix + 275. With portrait of the author and eight facsimiles of title-pages of ancient books on Bermuda. 1907. The Boston Book Company. \$3.00.